

PHILADELPHIA MEDICAL TIMES.

SATURDAY, DECEMBER 13, 1873.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE MEDICAL TREATMENT OF GRAVEL AND CALCULI.

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Delivered September 26, 1873.

IN a previous lecture I asked your attention to the formation of urinary calculi, and the method for determining their composition,—means so simple and easy of application that they should be familiar to every practitioner. To-day we will discuss the treatment of the condition incident to their presence and the tendency to their formation. None of you who have witnessed a case of nephritic colic need be impressed with the importance of being able to relieve the painful symptoms of this condition, or, still better, if possible, to prevent their occurrence.

The treatment naturally resolves itself into the *preventive*, the *solvent*, and that required during a *paroxysm* of nephritic colic. A hasty conclusion would seem to require that the latter two should be identical; but, when we come to consider the efficiency of the solvent treatment, we will soon discover that it is far too slow in its action to be relied upon when pain so severe as that caused by impaction of a stone is to be relieved.

I. Suppose, then, you are called upon to treat a patient in the agonies of nephritic colic, so called. Under these circumstances a small stone is supposed to have left the pelvis of the kidney and to be working its way through the long but narrow ureter, whose diameter is not greater than that of an ordinary knitting-needle, if as great. The evidence of such an attack is discovered in a degree of pain which is seldom surpassed in severity, and which, starting in the lumbar region, extends thence along the line of the corresponding ureter and groin to the testicle, which is often retracted. It is scarcely possible to mistake the import of such pain; and very likely the patient, from his experience in one or more previous attacks, will himself have made the diagnosis.

At this stage the composition of the stone is not of material importance. To relieve the pain is the urgent demand. Happily, means are at our disposal promptly to do this. A hypodermic injection of the one-sixth of a grain of sulphate of morphia, followed by hot poultices constantly kept up, will generally so far influence the pain as to give you at least a breathing-spell in which to prepare yourselves for further action. Suppositories containing one-half grain of extract of opium or a grain of powdered opium, with one-half grain of extract of belladonna, should be ordered, with directions that one shall be introduced into the rectum every three hours. A

more frequent use will scarcely be of further service, since not more than the quantity named is likely to be absorbed in this time. A hot bath may also be suggested in case relief is not obtained, and the hypodermic injection may be repeated, if necessary, at the next visit.

A specimen of urine should be obtained, if possible, before the second visit, and examined microscopically. In a certain number of cases no information whatever will be derived from it. In others, again, you will promptly detect crystals of uric acid, sometimes large enough to be seen with the naked eye, in the shape of the so-called "red-pepper" grains; in others the microscope will detect octahedra and dumb-bells of the oxalate of lime. In the former instance you have a uric acid calculus to deal with; in the latter probably a small stone of oxalate of lime, though not necessarily, since a deposit of crystals of oxalate of lime sometimes attends uric acid concretion; but the probabilities of the oxalate composition will be greatly increased if the crystals, whether octahedra or dumb-bells, tend to aggregate themselves, thus forming *microscopic calculi*. Whenever this has been the case, and I have subsequently obtained the stone for analysis, I have invariably found it to be composed of oxalate of lime. Phosphatic calculi are rarely the occasion of nephritic colic, since they are never found as primary stones in the kidney, nor indeed in the bladder; but are subsequently added to previous nuclei of whatever composition, in consequence of an alkaline reaction induced either in the whole mass of the urine or that immediately around the calculus, as the result of which the triple phosphates and phosphate of lime are deposited in consecutive layers.

Should such examination of the urine lead to a conclusion that the offending stone is uric acid, large doses of citrate of potash may be administered in connection with the anodyne treatment, partly in application of the principle to be presently explained in connection with the solvent treatment, and partly with the hope that by flushing the kidney with water the concretion may be pushed onward towards the bladder. If the calculus be oxalate of lime, such treatment can only be justified by the latter motive, since to hope for its solution is futile.

Should the patient become nauseated in the course of the above treatment, you may assure him that such a result is really desirable, since the increased pain is often due to a spasm of the muscular coat of the ureter, as the result of which the stone is more closely grasped, while the condition of relaxation due to the nausea may aid in interrupting the spasm, and thus relieve the pain.

Supposing the attack terminated, the stone has either reached the bladder, or, having established a temporary tolerance in some part of the ureter, remains quiescent for a time. In the former case it will probably be passed by the urethra, and, for the discovery of it, careful examination should be made; while in the latter it will inevitably excite another attack at some period more or less near.

II. It is with a view to dislodging such, as well as aiding in the escape of other stones which may be resting in the pelvis of the kidney, that the *solvent* treatment is used. By means of carefully conducted experiments by Dr. Roberts, of Manchester, England, author of the very useful practical book on "Urinary and Renal Diseases," we have arrived at quite accurate knowledge of our powers in this direction.

In the first place, however, let us recall the composition of renal calculi. For practical purposes it may be stated that three-fifths of all stones in the bladder have been found to be composed of uric acid or its compounds, two-fifths of phosphatic combinations, and three or four per cent. of oxalate of lime. But I have already said that phosphatic stones of small size rarely, if ever, exist in the pelvis of the kidney. It is only when calculi have reached considerable size, so that by partial occlusion of the ureter the urine has become backed towards the kidney, and in consequence of its accumulation has acquired, through decomposition, a change in its reaction, that the phosphatic laminæ are deposited, and at this stage curative medical treatment is totally out of the question. Indeed, it has been proven that the nuclei of almost all calculi which have commenced their formation in the pelvis of the kidney are composed of uric acid or oxalate of lime; and in a large number of calculi composed of uric acid there is found to be an oxalate of lime nucleus.

The solvent treatment, therefore, resolves itself into attempts to dissolve calculi of oxalate of lime or uric acid and its compounds. The general method of Dr. Roberts was to allow alkaline solutions to flow over stones soluble in alkalies,—that is, uric acid, urates, and cystine (a very rare concretion),—at a rate simulating that at which urine is supposed to trickle down from the kidney through the ureter; while acid solutions were caused to flow over those found soluble in acids, *i.e.*, oxalates and phosphates. The result of these observations proved that it is not impossible to produce some effect upon uric acid; that all attempts to dissolve oxalate of lime or mulberry calculus are futile; and that, although phosphatic concretions are susceptible to the action of acid solutions, the practical impossibility of producing through the system a sufficient degree of acidity of urine restricts the application of the principle to injecting the bladder with such solutions, with a view to acting upon phosphatic stones in that situation.

From this we learn that there is only reasonable possibility of acting upon uric acid and cystine with a view to diminishing their size by solution. The experiments of Dr. Roberts have also informed us what alkaline salts are most useful for this purpose. In the first place, he has shown that the potash salts are more efficient than the soda salts, and, secondly, that of these the carbonates are the most active. But it is well known that the citrates, acetates, and tartrates become converted into carbonates by the time they reach the kidney, or at least are eliminated as such; and in these we have preparations very much more agreeable, as well as more soluble

and better borne by the stomach, than the carbonates themselves. They become, therefore, the most suitable remedies to administer; and perhaps the citrate is to be preferred,—especially if no purgative action be required; but the acetate may be interchangeably used. Of these salts of the vegetable acids forty to fifty grains may be given every three hours, freely diluted, say in three to four ounces of water, with lemon or other vegetable syrup added, if desired, to flavor: about six drachms of the salt should be taken by an adult in twenty-four hours. Of course liquor potassæ and the bicarbonate of potash come under the same category; so also the lithia salts; but there is considerable difference of opinion as to the efficiency of the latter, some vaunting them very highly, while others declare them inactive on account of their sparing solubility, and I have not had sufficient experience with them to be justified in giving an opinion.

Some interesting facts, with which you should be familiar, were developed by Dr. Roberts as to the strength of the solvent solutions employed, since upon them is based the appropriate dose of the remedies. Thus, it was found that a strength of less than forty to sixty grains of the bicarbonate to the imperial pint was very much more feeble, while, on the other hand, solutions containing more than sixty grains to the pint exhibited also a diminution in solvent power, which was finally arrested by the formation of a white crust of alkaline *bi-urate* on the surface of the calculus. With a solution of eighty grains to the pint this *bi-urate* crust was loose and easily detached, like a layer of whitewash; but with a solution of one hundred and twenty grains to the pint it was tenaciously adherent, and very little dissolution took place with carbonate of potash, and none at all with carbonate of soda. With solutions of one hundred and sixty and two hundred and forty grains to the pint, there was no loss of weight with potash or soda; the fragments of stone became invested with a thin tough coating of *bi-urate*, resembling white paint, which put a stop to all solvent action.* The quantities of the vegetable salts above mentioned, and in the manner described, have been found by Dr. Roberts to produce the degree of alkalescence required; and he found further that when urine alkalized by the internal administration of these salts was passed over the surface of uric acid calculi at blood heat, the calculi underwent solution at the *mean rate of twelve and a half grains in twenty-four hours*. Such an exhibit at least merits a trial, and, as far as my experience goes, the trial has been justified by the results.

The treatment should be kept up for a considerable length of time, but should be discontinued when an ammoniacal state of the urine is developed, since under this condition solution ceases, while on the other hand a deposition of mixed phosphates (triple phosphate of ammonia and magnesia and amorphous phosphate of lime) takes place on the surface of the calculus, and it of course becomes larger. The simple presence of amorphous phosphates,

* Roberts's Urinary and Renal Diseases, p. 240, first American edition. Philadelphia, 1866.

however, which are often observed, particularly after a meal, need be no contra-indication, since they do not interfere with solution and are not disposed to concretion. It is the ammoniacal state which is to be avoided. An interruption of the treatment should be enjoined at such times until the urine again becomes acid.

Such is the solvent treatment of uric acid gravel; and, if it be clearly borne in mind what alone is claimed for it, a power of partial solution or diminution in size of small calculi, so that they may more readily pass through channels ordinarily much too contracted for them, and not the destruction of large stones already in the bladder, there need be no disappointment in its results. A stone in the bladder of considerable size should be turned over to the surgeon, who with his knife or lithotrite will make quick work of it.

You may perhaps wonder why I have said nothing about Vichy or other alkaline waters, which have not only had so much reputation in dissolving uric acid stone, but have also been used with such reckless indiscriminatio in all calculous disease, without regard to composition or indication. I have purposely made them secondary, because I believe them to be very much less efficient than the alkaline citrates and acetates of potash, while they are more expensive and difficult of access. And in this I am only following the precept of one whose great experience in these maladies entitles him beyond all others to our respect,—Sir Henry Thompson, who twenty years ago declared the "citrate and carbonates of potash are more potent and certain than Vichy water," and who says, so recently as 1873, "I have never at any time prescribed Vichy water for any urinary affection* on the ground of its inferiority to the potash solutions." I think the citrate may be fairly said to be the salt which of all others offers the best chance of success; and this by common consent of all who have examined the subject." Compared with such authority as this, confirmed by the carefully conducted experiments of Dr. Roberts, my own testimony to the same end is of little value, except that it adds one more to the list of those "who have examined the subject." I might say of the Vichy water that the alkali which it contains is the carbonate of soda, and not of potash, and of the former salt there are forty-seven grains to the English pint.

III. But if much may be expected from the solvent treatment of gravel, more may be expected from the preventive plan. Here also, for the reasons already stated, it becomes practically the preventive treatment of uric acid concretion and its congeners. And although it is the case that oxalate of lime calculi are quite insoluble in the solutions efficient in dissolving uric acid, and indeed in the system in any solutions, it happens that the circumstances attending their production are almost identical with those attending the formation of uric acid, and that the preventive treatment of the

latter becomes therefore the preventive treatment of oxalate of lime.

What, then, are the indications for the use of this treatment, by which we hope to prevent the formation of stone in the urinary passages? It is well known that urates, uric acid, and oxalate of lime crystals are occasionally found in the urine of individuals who are perfectly healthy. And you will many times be called upon to dispel the illusion based upon the appearance of "sediment" in the urine of a patient who is rendered unnecessarily wretched by that fact, and who is really in perfect health.

These deposits are apt to appear in urine, sometimes in considerable quantity, not only after an attack of indigestion, but also from defective assimilation even without symptoms of indigestion, and by whatever cause induced, whether from gross disregard of the proprieties of eating, or the use of a single glass of wine to which one has not been accustomed. And oxalate of lime crystals are almost always found in the urine after a meal of vegetables containing oxalic acid, as of sorrel, tomatoes, or rhubarb. I have often told you that when I wish to obtain examples of the octahedra of oxalate of lime, for examination with the microscope, I always secure a good crop in my own urine by eating a full meal of the rhubarb or pie-plant, if it be in season; in a few hours after which, my urine is loaded with beautiful crystals of large size. I also know a medical gentleman who is unable to eat tomatoes, because of the crystals of oxalate of lime which appear in his urine and give him pain in their descent to the bladder.

How, then, are you to determine the presence of the so-called "uric acid diathesis"? In the first place, by the persistence of the deposit, which is usually pinkish in hue, or gives to the urine a cloudy appearance which is dissipated by heat. And here I must again caution you against a deposit which always takes place when urine is cooled much below the temperature of the blood. The urates in health are usually present in the urine in such quantity that they are dissolved at the temperature of the body,—that of the urine when it is passed,—or even at a temperature somewhat lower. In cold weather, therefore, when the urine becomes cooled much below that point, a deposit inevitably takes place, which is usually found made up of the amorphous mixed urates of potash, soda, lime, and magnesia, and is physiological.

If, however, having observed the precautions suggested by the above facts, the deposit persists day after day, and you find upon inquiry, as you will be very likely to, that the patient's father or grandfather had attacks of "gravel" (for the affection is very constantly hereditary), you may conclude that you have a case of uric acid gravel. Or if the patient or his ancestors have had gout, you may be equally confident; because this is also well determined, that uric acid gravel and gout are identical in their causation. For, in addition to the fact that the gouty deposits in the joints are made up of mixed urates generally crystallized in acicular form, we have numerous cases in which an attack of

*The Preventive Treatment of Calculous Disease, p. 58, Lindsay & Bakist, Philadelphia, 1873.

gout alternates with one of uric acid, or one member of a family has gout and another uric acid gravel. Indeed, gouty patients almost always have deposits of urates and uric acid in their urine. Finally, I need only allude to the inference you may draw if the patient has already suffered an attack of nephritic colic.

Supposing the presence of such a condition determined, how will you manage it in order to prevent the final great evils, renal calculi or stone in the bladder? Here, as elsewhere, the foundation of a correct treatment must be a knowledge of its pathology. And what is the pathology of uric acid, and I may say also of oxalate of lime deposits? With one universal accord the persistent presence of these deposits in the urine is admitted to be indicative of deficient assimilation. From some cause or other, food which should be worked up into completely soluble substances stops short at principles which are most insoluble, and which, therefore, are deposited, in the crystalline shape alluded to, in the tubules of the kidney and pelvis of the organ, where they act as foreign bodies, causing irritation and pain, and in their aggregation form the calculi the transit of which to the kidney causes so much suffering. Attending this condition is often found a so-called torpor of the liver and bowels,—that is, a condition which, whatever its true nature, is attended with deficient excretion into the alimentary canal.

Under these circumstances the kidney is already overworked in its attempt to remove from the blood these insoluble and irritating substances, and the indication is to relieve it by throwing the work, or a part of it, on some other organ. It is not sufficient to administer Vichy water or other alkaline substances, which by dissolving the uric acid and urates simply hide the enemy without preventing its presence. Such a course is aptly compared by Sir Henry Thompson to that of the fabled ostrich which is said to bury its head in the sand when pursued, and believes itself secure because it no longer sees its enemy. There may be, it is true, palliation of symptoms by such treatment, and the patient may be for the time relieved as well as comforted by the fact that he no longer *sees* the deposits, but they will often return when the remedies are discontinued.

This is, of course, admitting a purely *chemical* action of alkalis in promoting the solution of uric acid; but it is too sweeping an assertion with regard to the valuable citrates, tartrates, and acetates previously alluded to, which have been shown by Drs. D. Campbell Black, Basham, and Geo. Harley to have something more than an action of this kind, and to possess also, when administered, an important *physiological* action through which the oxidation processes of the economy are much increased, so as to transform the slightly soluble uric acid into the highly soluble urea,—apparently through an increased activity of all the digestive functions. Nor is this effect overlooked by Thompson, who alludes to it in claiming the superior efficiency of the citrates and tartrates over Vichy and similar carbonated waters.

If, however, it is possible to divert some of the work of the kidney to another channel, and thus relieve an organ already overworked, it is much better at least to superadd and sometimes, perhaps, to substitute such treatment. This may be accomplished by acting upon the liver and bowels,—organs which in their combined action are quite as important excretors as the kidney. Few who have had experience in these cases have not seen the advantage of a mercurial purge at night, followed by a saline the following morning. The constant use of these means, however, would be impossible, for evident reasons, and others must be sought, in application of the same principle of complemental elimination. Such means are afforded in the natural *saline* purgative waters, for the general introduction of which we are also largely indebted to Sir Henry Thompson. These have for their chief ingredients sulphate of soda and sulphate of magnesia, and are represented by the Püllna, Friedrichshalle, Marienbad, Carlsbad, and Franzenbad Springs in Germany. The Püllna waters contain about one hundred and fifty-four grains of sulphate of soda and one hundred and sixteen grains of sulphate of magnesia to the English pint; those of Friedrichshalle, fifty-eight grains and forty-nine grains, respectively; those of Marienbad, forty-eight grains of sulphate of soda, none of magnesia, nine grains of *carbonate* of soda, and a little iron. The Carlsbad contain twenty-five grains of sulphate of soda, no magnesia, and thirteen grains of carbonate of soda; the Franzenbad, thirty grains of sulphate of soda, no magnesia, six grains of carbonate of soda, and a little iron. In contrast with these, Vichy contains but three grains of sulphate of soda, no magnesia, forty-seven grains of carbonate of soda, and a little iron, to the pint; and Vals, none of the former two, but sixty-five grains of carbonate of soda, with a little iron. The latter are, therefore, as already stated, simply strong solutions of carbonate of soda.

Of these waters, that to which Sir Henry Thompson gives the preference, and that upon which my own experience has been based, is the Friedrichshalle, the Püllna having been found to purge too freely and to produce griping. Of the Friedrichshalle about eight ounces or an ordinary tumblerful may be given every morning about an hour before breakfast. This is usually followed after breakfast by one or two full copious stools, produced by about twenty-five grains of sulphate of soda and twenty of sulphate of magnesia,—quantities which if dispensed from the shops or even by evaporating the proper amount of the natural water would probably have no effect whatever, though the latter would still be more efficient than the salts as ordinarily obtained. Thus there will be seen to be some peculiar efficacy in the natural waters, the cause of which is not precisely known. This treatment should be kept up for three weeks to a month, and after a short intermission be returned to. In continuing the treatment, there will be found this important advantage, that, instead of having to increase the quantity each day, it may be diminished, while the effect will still continue, so that by a gradual reduction, at the end of three weeks, four ounces will

have as much effect as eight at the outset. It is occasionally of advantage to precede the treatment by a small dose of blue pill,—three to four grains; this, if digestion be deranged, the appetite bad, and the tongue foul. Sir Henry Thompson also recommends the use of five ounces of hot water in connection with the eight or reduced amount of the Friedrichshalle; but I have found patients complain of discomfort evidently due to a distention of the stomach when this dose is administered. When it can be borne, additional effect may reasonably be expected from the dilution as well as the increased temperature, since in both these respects it is made to approach the character of the water at the spring, which is hot and less concentrated than that which is exported. The increase in temperature may also be obtained by placing the glass of water in a second vessel containing hot water.

You may wish to know precisely the plan of the eminent English surgeon. It is to administer the Friedrichshalle as above directed for one, two, or three weeks, according to the nature of the case and results, and then to combine with three or four ounces of it five or six of the Carlsbad, which you will recollect contains twenty-five grains of the sulphate of soda and thirteen of the carbonate to the pint; it is therefore more alkaline. To this combination he adds three or four ounces of hot water. After giving this for two or three weeks, six, seven, or eight ounces of hot Carlsbad are given alone for another fortnight. This course may be repeated once in three or four months, if necessary, while in the mean time, as an occasional aperient and corrector of digestion, he knows nothing at all equal to Friedrichshalle, leaving the patient, as a rule, less constipated than he was before. With a very much less experience, of course, but having examined the subject with considerable care, and having lost no opportunity of testing the plan, it has seemed to me we can do much more for these cases than formerly.

Should the Friedrichshalle prove insufficient in some cases, the Püllna may be substituted as a more powerful water, containing, as it does, nearly two and one-half drachms of sulphate of soda and nearly two drachms of sulphate of magnesia to the pint.

These waters, including Püllna, Friedrichshalle, and Carlsbad, are now easily obtained in this country, being largely imported by a Philadelphia firm. I must say, however, that the various salts of these waters advertised for sale as the "Carlsbad salt," "Püllna salt," etc., are no substitute for the natural waters, having very little more virtue than the same quantity of salts obtained from other sources.

The expense of obtaining these waters in this country will doubtless be an obstacle to your ordering them for some patients. I have therefore taken some trouble to find out which of the numerous American spring waters correspond or approach them in composition. Most prominent among these I find the waters of Crab Orchard Springs, located at Crab Orchard, Lincoln County, Kentucky. These waters contain 7 grains of sulphate of soda, and 25.6 grains of sulphate of magnesia, to the pint. From these are derived by evaporation the cele-

brated Crab Orchard salts, whose superiority over the ordinary Epsom salts is well known. These contain 63.19 parts of sulphate of magnesia, 4.20 parts of sulphate of soda, with smaller quantities of sulphate of potash and lime, in 100. Besides being less irritating than Epsom salts, they possess the advantage claimed for Friedrichshalle of not requiring the daily quantity necessary for an effect (at first a drachm freely diluted) to be increased. The Estill Springs, located in Estill County, Kentucky, furnish thirty-three grains of sulphate of magnesia to the pint; but no sulphate of soda is named in the analysis of Dr. Robert Peter, which I find in Walton's Treatise on the Mineral Springs of the United States and Canada.

The well-known Bedford Spring waters at Bedford, Pennsylvania, also belong to this class, though containing but ten grains of sulphate of magnesia to the pint. They are also chalybeate, and are said to resemble the Franzenbad waters of Bohemia, to which we have referred; but the latter contain thirty grains of sulphate of soda to the pint, while the Bedford contain but ten grains of sulphate of magnesia. The beautiful location of Bedford, in connection with the undoubted medicinal value of its waters, renders it a very popular summer resort. I may add that "gravel" and "calculus" are among the ills for which Bedford water has long claimed efficiency. The numerous Saratoga springs contain almost none of these valuable ingredients, but pre-eminently chlorides and carbonates. Thus much of information, and something more, you should have of American spring waters, in order that you may intelligently advise those who consult you with regard to them. It is not unlikely that the skepticism with which American physicians have hitherto regarded the medicinal effects of spring waters has been, in part at least, due to our ignorance of their actual qualities, and that we are, therefore, in a measure responsible for their having largely fallen into the hands of empirics. Much valuable information may be found in the volume above alluded to, and one or two others recently issued from the American press.

There is one more point in connection with the preventive treatment of calculous diseases to which I must call your attention, and that is diet. I have already alluded to the effect of certain vegetables, as the rhubarb or pie-plant, tomato, and sorrel, in promptly producing crystalline deposits of oxalate of lime. By persons, therefore, inclined to oxalate of lime concretions, these should be avoided. There is also reason to believe that potable waters charged with the salts of lime increase the tendency to the formation of oxalate of lime calculi. To the same end, fatty matters, saccharine substances, and those containing sugar or readily converted into it, as sweet fruits, together with alcoholic drinks, should be omitted by those subject to uric acid deposits; the use of these matters increasing the work of the liver, and, with it, the vicarious action of the kidneys. While the use of a purely nitrogenous diet is, for the same reason, to be avoided, and the free use of vegetables, regarding the exceptions named, to be recommended, total abstinence from animal food is not

necessary or desirable. Nor need tea and coffee be interdicted, these substances having been shown to diminish the formation of uric acid and increase that of urea, acting, therefore, like the citrates, acetates, and tartrates. Quinine, digitalis, atropine, and cod-liver oil are placed in the same category,—diminishing the formation of uric acid and urea as well,—and may be used in connection with the previous treatment as the patient's condition or special circumstances may require.

ORIGINAL COMMUNICATIONS.

MALIGNANT DISEASE OF THE EAR, WITH PARALYSIS OF SOME OF THE CRANIAL NERVES.

BY GEORGE C. HARLAN, M.D.,

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E. C., three years of age, was brought to the dispensary of the Children's Hospital to be treated for a disease of the left ear. She had had scarlet fever a year before, and had not been in good health since. About three months before, she had become restless, slept badly, and seemed in pain, and within two months attention was for the first time called to the ear by a slight bloody discharge. Soon after this it was noticed that she had pain in swallowing, that the parts about the ear were swollen, and that the face was drawn to the right side when the child cried. Her appetite failed, and she became very feeble.

At the time of examination, August 4, there was a slight amount of thick purulent discharge in the meatus, on removing which, a large, firm, rounded polypus, the size of a pea, or larger, was found blocking up the meatus. There was a fluctuating swelling beneath and behind the auricle. When the polypus was removed, by means of Wilde's snare and the rectangular forceps, there was a considerable discharge of sanious pus, increased by pressure on the external swelling. A free incision of the external swelling gave exit to a copious discharge of offensive pus. No dead bone could be detected by the probe. The left side of the face was swollen and puffy, and the mouth much distorted to the right side in crying. The left eye was never closed, even in sleep. The conjunctiva was free from congestion, the pupil movable, and the cornea clear and bright. There had been a convergent squint of the right eye of long standing, but the mother said this was increased, and the left eye was also inverted. The left half of the tongue was much swollen and rough, in strong contrast to the right, which was normal.

August 8.—The polypus had grown again nearly to its former size, and was again removed by forceps without pain and with only a few drops of blood.

August 20.—The polypus had grown again to its former size. The incision behind the ear, which had been kept open with difficulty by tents, was now gaping, and a fungous growth appearing in it.

On August 29 the polypus had become strangulated and sloughed off, and the external tumor had grown to the size of a walnut. There was a free discharge of healthy pus by the side of the tumor.

The upper lid was now immovable, and nearly closed, the conjunctiva injected, and the cornea dimmed.

September 1.—The tumor had increased to the size of a hen's egg. It was lobulated and had a bright-red granular surface.

The upper lid was now quite closed; the conjunctiva

was much congested, and the whole cornea was hazy and its lower fourth infiltrated. The convergent squint had nearly disappeared. There was a free sanious discharge from the *right* nostril.

September 17.—There was a penetrating ulcer of the cornea with protrusion of the iris: as the patient's mother aptly expressed it, "the eye seemed to be melting away."

September 21.—The child was breathing with difficulty through the mouth and the right nostril, which was much dilated and expanding and contracting laboriously.

She died September 25, apparently of exhaustion. No post-mortem examination was permitted beyond the removal of the tumor. The bone at its base was found roughened and eroded.

The tumor was exhibited to the Pathological Society and pronounced by the Committee on Morbid Growths to be a round-celled sarcoma.

The chief points of interest in this case are afforded by the nerves involved in the disease.

Such extensive destruction of the walls of the tympanum could not well occur without affecting the portio dura in its passage through the aqueduct of Fallopius, and causing the complete facial paralysis which appeared among the earliest symptoms. The difficulty of breathing was evidently much increased by the loss of the respiratory action of the left nostril, and the excessive action of the right nostril was painfully apparent. It is known that section of both facial nerves in the horse will cause the animal's death from suffocation; and we may well suppose that so young a child would find greater difficulty than an adult in breathing through the mouth.

Paralysis of the sixth nerve increased the convergent strabismus, which was corrected and the ball rendered immovable when the disease extended to the third.

The levator palpebræ was at the same time involved, and the eye, which had been held widely open in consequence of paralysis of the orbicularis, was now closed by falling of the lid.

The inflammation of the conjunctiva and cornea which appeared at this time presented a typical case of neuro-paralytic ophthalmia, without doubt due to paralysis of the fifth, or of its ophthalmic branch, and a point of special interest is the fact that the destructive inflammation of the cornea did not commence until after the ptosis had completely closed the eye. This excludes the theory that the affection of the cornea in such cases is always due to the mechanical injury of external irritants of whose presence the eye has been rendered unconscious. Though much weakened of late, and by some now abandoned, this theory was at one time generally admitted to be well established. Soelberg Wells speaks of it as "uncontrovertibly proved by the experiments of Snellen and others."

The free muco-sanious discharge from the right nostril was a singular phenomenon, no other symptom of nerve-lesion having appeared on that side. An increased discharge from the nostril of the affected side has been noted by experimental physiologists after section of the fifth nerve, but there was no excessive secretion from the left nostril in this case.

A similar increase of nasal secretion on the side opposite to the injury is noted in a case of injury to the sympathetic nerve in the neck, reported by J. F. Payne (St. Thomas's Hospital Reports, vol. iii., new series).

There is a bare possibility that the hypertrophy of the left side of the tongue might have been congenital. But this does not seem likely, as it was so marked that it scarcely could have escaped notice, and the child was otherwise perfectly symmetrical. Though the chorda tympani was necessarily, and the gustatory probably, involved, I am not aware that either paralysis or irritation of either of these nerves has been known to produce such a result.

The nervousness and peevishness of the little sufferer, who cried whenever I came near her, rendered it impossible to test the smell or taste, or even the general sensation.

NOTES ON SKIN-GRAFTING IN INDOLENT ULCER; ALSO, ON RETAINING DRESSINGS IN ORCHITIS.

BY ALFRED C. GIRARD, M.D.,

Assistant-Surgeon, U.S.A.

CORPORAL —, 1st Artillery, reported sick with an indolent ulcer on the inner surface of the right leg, close to the tibia, and four inches below the knee. Had been in hospital the preceding year with the same complaint on the same spot. Apparently no constitutional disease; slight varicosity and signs of stagnation in the veins of the ankle. The ulcer was almost circular, had a diameter of three inches, and presented the usual appearance, with particularly hard, elevated, and ragged edges. Cauterization, poulticing, and strapping were tried for two weeks, without the slightest change being produced, when I determined on trying skin-grafting, which I had once found quite useful in the treatment of a large syphilitic ulcer involving the whole of the ankle. I excised two small pieces of skin of the size of a millet-seed from the abdomen, and laid them on some of the irregular granulations in the centre of the ulcer. In six hours, as if by magic, the bottom of the sore appeared raised, the edges lost their callous appearance, and the next morning—twenty-four hours after application of the grafts—cicatritial tissue commenced bridging over the space between them and the edges. In one place, however, where the edge was undermined and ragged, farthest from the grafts, no change had taken place; and I applied a third graft in its vicinity with equally satisfactory results. In seven days the ulcer was entirely cicatrized without other treatment.

I may as well mention here an appliance which has given me great satisfaction in the treatment of gonorrhœal orchitis. Every physician knows the annoyance caused by the usual strapping with adhesive plaster in this complaint: the dressing is either too tight, and consequently very painful to the patient, or else loose, and then useless. In either case it has to be removed frequently, causing

much labor to the dresser and pain to the patient. I therefore tried the "*elastic bands*" which are furnished the army for stationery, imprisoning at first the testicle with the smallest size, and selecting for the compression such sizes as could be well borne by the patient. I thereby secured *constant, easy, and painless* compression; the dressings could readily be changed for any purpose, and admitted of other local treatment if found desirable. This mode of treatment has proved very successful.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS, M.D.

Reported by JOHN B. ROBERTS.

AMPUTATION OF THE LEG ON ACCOUNT OF CARIES OF THE ANKLE.

THIS boy was struck upon the ankle with a stone, nine years ago; which injury, acting as an exciting cause, has been followed, in a child of the scrofulous diathesis, by caries of the tarsal bones, as is proved by the probe introduced into any of these sinuses leading to the joint.

The disease is so extensive that excision of the ankle-joint and amputation at the inferior third of the leg are the only procedures worthy of consideration. In the main, amputation is the more expedient in these cases, since it can be done with very little risk to life, and is less likely to be followed by erysipelas and violent inflammation than excision; which latter operation at best gives a shortened limb and an ankylosed joint. Nevertheless, as it is doubtful how much of the tarsus is involved in this instance, I shall endeavor to resect, hoping that the disease is limited to the articular surfaces of the joint. If, however, it is found impossible to remove all the carious bone by this means, it will then, as an attempt to preserve the foot has been made, be proper to amputate through the leg.

A curvilinear incision having been made over the outer side of the foot, the tendons of the peroneal muscles are separated from the fibula, that they may not be divided by the saw, and the periosteum carefully detached, in order to favor as far as possible the subsequent production of bony material. After the ligamentous connections on this side have been severed, another incision is made on the internal aspect of the foot, and the tissues separated in a similar manner. The next steps in the operation are to saw off the external malleolus, and to bend the foot outward, causing the extremity of the tibia to protrude at the wound on the inner side of the ankle. The soft tissues are detached from this bony surface with great care, to avoid injury to the tibial arteries, and the articular portion of the bone is sawn off as high up as the caries extends; after which the astragalus and all the other tarsal bones that are diseased must be removed by the gouge and chisel.

Upon a critical examination of the condition of the tarsus, however, the disease is found to have invaded the bones to so great a degree that the preservation of the foot by exsection of the joint is rendered impossible, and it will therefore be necessary to perform amputation above the ankle.

In order to prevent hemorrhage during this operation, the femoral artery is controlled by digital compression, which is applied just where the vessel emerges from under Poupart's ligament; for in that situation it lies di-

rectly over the margin of the acetabulum and the head of the femur, so that the current of blood be arrested by a moderate degree of pressure against the hard bony surface.

The circular operation is a method well adapted for amputation of the lower portion of the leg, and will therefore be employed in this instance. The integument, having been divided by a long knife carried rapidly around the limb, is dissected from the underlying muscular structures, and turned backwards like the cuff of a coat; which eversion can be facilitated by making a vertical incision on the side of the flap. After this procedure the muscles are incised on a level with the retracted cutaneous flap, and, having been previously separated from the bones, are drawn back by a retractor in order to permit the application of the saw some distance above the joint where the muscles have been divided. In performing this step of the operation, it is important to saw through the fibula first, since it is the smaller bone, and would probably be splintered if left until the tibia had been divided, and to take care to inflict as little injury as possible upon the periosteum, for the danger of necrosis is in proportion to the extent of laceration that this membrane suffers. Hemorrhage is arrested by ligation of the anterior and posterior tibial and interosseous arteries, the edges of the flap brought together by sutures, and the wound dressed with an oiled compress retained by means of adhesive strips.

On dissection of this foot which has been removed, it is found that the calcaneum and all the other bones of the tarsus, as well as the proximal extremities of the metatarsal bones, are carious. This proves conclusively that excision of the ankle would not have been advisable in this instance; for the impossibility of removing such an extent of carious bone with a prospect of bringing the healthy portions into apposition is sufficiently apparent.

EPITHELIOMA OF THE FOREARM—REMOVAL OF THE DISEASE BY AMPUTATION OF THE ARM.

Henry M., aged 31 years, had, when a child, his right forearm crushed in a grist-mill, without, however, any injury being done to the bones. The wound did not heal, but took on epithelial disease, and now, twenty-three years since the receipt of the original injury, the entire forearm is a mass of epithelial cancer, which, having first attacked the skin, has, during its progress, invaded the deeper tissues of the limb, rendering amputation of the arm necessary for the removal of the disease.

Its removal is certainly demanded, for the patient is subject to frequent and copious hemorrhages from the diseased structures, which have rendered him exceedingly feeble, and, if continued, may lead to a fatal issue. It is probable that there is also encephaloid disease present here, for epithelioma is prone in its later stages to assume this character; which form likewise makes its appearance quite frequently at the cicatrix left after the removal of an epithelial cancer.

This man's arm from the elbow to the wrist is one enormous, unhealthy-looking, fungating ulcer, and discharges a thin sanious fluid; while the hand is swollen and greatly distorted by the involvement of the muscles of the forearm in the ulceration.

Epithelioma, canceroid, or epithelial cancer, as the affection is variously denominated, most frequently attacks the lower lip, the tongue, the anus, the rectum, the vagina, and similar mucous and cutaneous structures, but is not limited to these tissues, for it is occasionally found invading also the muscles and bones. Its cause is not understood, though not infrequently it is traumatic, as in the present instance, and in a case where I amputated in this room at the shoul-

der-joint, on account of a large epithelial ulcer originating in the scar of a burn received a number of years previously. The affection is slow in growth, and usually begins as a tubercle or warty excrescence, which subsequently, assuming ulcerative action, extends in every direction, often committing frightful ravages upon the surrounding parts, and sparing in its progress not even bone or cartilage. The pain accompanying the disease is lancinating, and frequently very severe, resembling in a marked degree the characteristic pain experienced in the progress of scirrhus.

The only operation to be performed for the removal of the morbid growth in this case is amputation of the arm about midway between the elbow and shoulder, which will be done by the flap method. In amputation by this method the flaps may be formed by transfixion of the limb and cutting outwards, or by carrying the knife from the external surface inwards towards the bone: the former of these is the preferable and more expeditious mode of operating in the arm and thigh.

This long amputating-knife is therefore pushed through the tissues from one side of the limb to the other, in close contact with the bone, and carried downwards until sufficient length has been given to the flap, which is finally completed by turning the edge of the knife and bringing it to the surface in such a manner as not to form a thin narrow extremity. Then the internal flap is made in a similar manner, and, the brachial artery having been seized by an assistant as soon as it is severed, both flaps are retracted by the same assistant, in order to allow the knife to be carried around the humerus, to divide the periosteum and any remaining muscular fibres, and to permit the application of the saw. When the limb is very muscular, it is advisable to retrench the flaps by removing slices of the muscles, for this manipulation gives a more seemly stump and renders it better for the adaptation of an artificial limb. The arteries are now ligated, having been previously isolated so that nothing but the vessel itself is included within the ligature, and the nerves are drawn out and cut off high up, in order to prevent the occurrence of neuralgia and neuromata that might be produced by pressure upon their divided extremities.

The wound will be left exposed to the air for a couple of hours, until the surface becomes glazed, and then the edges of the flaps will be brought into apposition by sutures and narrow adhesive strips; but no dressing other than this will be applied, because by causing the retention of the fluids secreted it might interfere with the process of cure.

NEW TEST FOR ALBUMEN (*Boston Medical and Surgical Journal*, October 23, 1873).—Picric acid has been recommended as a test for albumen. If a drop of the fluid to be examined be allowed to fall into picric acid, it sinks through, and, if albumen be present, leaves a white streak. Dr. Bowditch has found that two drops of egg-albumen added to 20 c. c. of urine gave a slight reaction with heat, a distinct one with nitric acid, but none with picric acid, and that on increasing the quantity to four drops only a feeble reaction was obtained.

CHILBLAINS.—Mr. Fergus recommends sulphurous acid in this affection. It should be applied with a camel's-hair brush, or by means of a spray-producer. One application of this usually effects a cure. The acid should be used pure. A good wash for hands or feet affected with chilblains is sulphurous acid, three parts; glycerin, one part; and water, one part. The acid will be found particularly useful in the irritating, tormenting stage of chilblains.—*Druggist's Circular*.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

PUBLISHED EVERY SATURDAY BY

J. B. LIPPINCOTT & CO.,

715 and 717 Market St., Philadelphia, and 25 Bond St., New York.

SATURDAY, DECEMBER 13, 1873.

EDITORIAL.

WHITHER ARE WE DRIFTING?

TO say exactly how low the American medical profession is to be sunk in the eyes of the people by the exhibitions offered in our courts of justice would require the voice of the prophet; but to perceive that we are sinking day by day lower and lower needs no "second-sight." Not long since, we heard a prominent lawyer in this State assert that he could get some doctor or doctors to swear to anything. Of course we contradicted, but of course we felt that there was a large measure of truth in what he said. It was with a sense of real shame that we awaited some taunting reply to our denial, expecting to be asked to reconcile the positive statements of the chief medical witness in the McFarland defence with his precisely opposite and equally positive printed opinions in regard to emotional insanity. Fortunately, our legal opponent was not so well posted as he might have been.

The Stokes-Fisk case has closed, and, amid the rush of events, under the shadow of the trials of the prince of plunderers and his followers, will soon be merely a matter of history to the general public. Unfortunately, the medical testimony given at the trial will be no less a matter of history. Seven doctors, most of them men of the highest rank in the profession, having attended the wounded Fisk during his lifetime, were at the trial confronted by Professors in medical colleges, by physicians supposed by the people to be representative, swearing with greater or less positiveness that not Stokes but

the doctors killed Fisk,—not the pistol but the hypodermic syringe sped the fatal bullet. Really, to see our exalted cotemporary the *New York Medical Record* searching around to find the reason that the profession is sinking so in public esteem, whilst such scenes are enacted before it, seems to us quite amusing.

Still more recently come tidings from the far West of similar degradation. This time it is not life, but property, that is at stake. It seems that a gentleman completed ten days before his death a will which showed that he called to mind all the members of his family, various persons to whom he had become attached, and several purposes which he had strongly favored during life. It was proven beyond cavil that there was a reason for every one of his numerous bequests, such as was compatible with complete soundness of mind; that he was ten days in making the will; that he continued to speak of its dispositions afterwards for several days; and that no one of the several persons about him—physicians, personal friends, one or two clergymen, and the drawer of the will—observed the slightest wandering at any time, or any remark "sounding to folly."

Yet some eight or nine doctors, including one Professor, were found who testified that the man was incapable of making a judicial will; that he must have lost, at the time of the completion of the instrument in question, all power of conscious and continuous thought; that he must have been incapable of transacting any business whatever. Why? Because carbon must have been retained in his blood!—since he had died of some pulmonary disease, and at post-mortem examination the lungs were found to have lost, through induration, two-thirds of their breathing-capacity.

WE do not believe that doctors are often dishonest in their statements on the witness-stand; but we do believe they are not rarely culpable in assuming the possession of knowledge that they do not have, and sometimes lend themselves, unconsciously, to the suppression of a part of the truth. The surroundings of medico-legal practice in our American courts are excessively bad. The specious pleading of lawyers, the demands of sympathy, the grinding force of an active public opinion, the chance of a notoriety which weak minds sometimes mistake for fame, the temptations of large fees, are of such power as to be resisted only by those strong not only in moral integrity, but also in their personal knowledge that they have studied the subject to the bottom. Yet

we have known prominent practitioners of medicine, ignorant of medical jurisprudence or of the subject under consideration, "cramming themselves" for an opinion which should turn the scales of justice when life itself hung in the balance.

In what way it is to be achieved we confess we do not exactly see, but, unless we are willing to share the public opprobrium which the present customs are rapidly producing, something must be done to create among us medical jurists, and to have some law or general medical opinion that shall prevent ignorant men, or wise men ignorant of the especial subject, from disgracing the profession on the witness-stand.

A PSYCHOLOGICAL PHENOMENON.

TO those of our readers who are fond of psychological studies the present article is addressed. Once, when serving as *interne* in a hospital under Prof. Gross, our learned chief said, "Give this patient so-and-so." "The man came in yesterday, and I ordered that for him then," was the reply. Quickly came back the answer, "You see, doctor, great minds flow in the same channel." Our psychological curiosity is on the same wise.

Most of our readers will no doubt remember our editorial of November 8 on Professional Advertisements. Curiously enough, the editor of the *Chicago Medical Examiner*, in the issue of that journal for November 15, discourses upon a similar topic, and still more curiously do his sentences run parallel with ours, as is witnessed by the following paragraphs:

"It has been freely asserted that the established physicians who constitute the Council, desiring to maintain the undisputed possession of their respective cocklofts, have kicked away the ladder up which they have climbed. One 'medicus' asserts that to stop advertising his books would 'retard his advance in practice ten years, and keep him starving,' and pointedly calls attention to the fact that the works of Mr. Carling, President of the College, have been advertised to such an extent as to make Carling and testis household words in the community, and consequently to establish their author. Another correspondent alludes pleasantly to the circumstance that the *London Lancet*, which has strenuously upheld the Council, placards the railway stations with the titles of communications on 'Tumors of the Womb,' 'Rectum,' and other subjects generally supposed not to offer edifying reading for mixed companies of ladies and gentlemen."—*Philadelphian Medical Times*.

"It is claimed by some that the established physicians, who constitute the council, desiring to maintain undisputed possession of their respective cocklofts, have kicked away the ladder up which they have climbed. One 'Medicus' asserts that to stop advertising his books would 'retard his advance in practice ten years, and keep him starving;' and pointedly calls attention to the fact that the works of Mr. Carling (*sic*), president of the college, have been advertised to such an extent as to make Carling (*sic*) and testis household words in the community, and consequently to establish their author. Another correspondent alludes pleasantly to the circumstance that the *London Lancet*, which has strenuously upheld the council, placards the railway stations with the titles of communications on 'Tumors of the Womb,' 'Rectum,' and other subjects generally supposed not to offer edifying reading for mixed companies of ladies and gentlemen."—*Medical Examiner*.

We commend this to the attention of all students of psychology, of all collectors of coincidences. We explain it by the wise saying of Prof. Gross, and warn our "*amour-propre*" with the inevitable deduction.

THE case of operation for *aneurism* by Dr. Levis, which we have editorially commented on once or twice, terminated fatally. Dr. Levis has promised us a full report of it.

The case of *ovariotomy* reported some little time ago as part of Professor Gross's clinic also had a fatal termination.

CORRESPONDENCE.

LONDON LETTER.

[From Our Own Correspondent.]

Esmarch's Bloodless Method of Operating—The Art of Garbling in the Larynx—Hospitalism—Intended Discussion at the Clinical Society of London—Sir Henry Holland—His Fortune—His Funeral—The Court Appointments—Dr. Burrows—Dr. Sieveking.

LONDON, November 14, 1873.

A GREAT deal of interest has been excited among metropolitan surgeons by the introduction here of an improved method of preventing hemorrhage in surgical operations, known as Esmarch's bloodless method. It has been introduced by Professor Esmarch, of Kiel, the well-known son-in-law of Stromeyer, and one of those careful, exact, and able observers, every one of whose publications is always worthy of careful study. Esmarch's method is so great an improvement on all previous efforts in the same direction, of which there have, of course, been many, as to be entitled to be considered an invention of the highest surgical importance. Of course many surgeons have endeavored, by systematically elevating a limb before operating on it, to empty it of blood, as well as so to restrict the access of blood by pressure on the main arterial trunks as to reduce the shock by loss of blood to a minimum; but the success has always been more or less imperfect. By the adoption of Esmarch's method the loss of blood is reduced to insignificance; and, what is hardly less important, operations on the limbs requiring careful dissection are performed with as little embarrassment from hemorrhage as if the surgeon were actually engaged on the dead subject. The method has been very extensively tried here. It was first described in the *London Medical Record*, from the data of Esmarch, Billroth, and Meiszel, by Mr. William MacCormac of St. Thomas's Hospital, who at the same time announced his successful application of the method; and subsequently in the same journal (No. 42, October 22) a full translation was given of a lecture published in *Volkman's Sammlung*, in which the whole method and its applications are fully discussed. It has come into very general use here in consequence, and is so absolutely free (as far as hitherto observed) from any bad conse-

quences and so fertile in advantages that it seems likely to take at once a permanent place among surgical procedures.

The mode of proceeding is graphically described by Esmarch himself, as follows:

"While the patient is being chloroformed, we wrap the leg in waterproof varnished tissue-paper, so that the pus from the sinuses may not soil the bandages; then, with these elastic bandages, made of india-rubber webbing, we envelop each leg from the tips of the toes to above the knee, and, by equal compression, force the blood out of the vessels of the limb. Immediately above the knee, where the bandage ends, we apply this piece of india-rubber tubing four or five times round the thigh, drawing it very tight, and fastening the hooks which you see at one end to the brass rings at the other. The india-rubber tubing compresses all the soft parts, including the arteries, so completely that not a drop of blood can pass into the part which has been tied off. It has this advantage over all tourniquets, that you can apply it to any part of the limb, and need not give yourself any trouble about the position of the principal artery. Even in the most muscular and fattest individuals, you can perfectly control the flow of blood in this simple way.

"We now remove the india-rubber bandage which was first applied, and the varnished paper lying under it; and you see that both legs, below the compressing tube, perfectly resemble the legs of a corpse, presenting in their pale color an almost dismal contrast with the rosy hue of the remaining parts of the surface. You will see, too, that the operation will be in all respects like one on a dead body."

By employing this method, exploratory proceedings to ascertain the extent of disease before deciding finally the variety of operation to be performed (excision, partial excision, amputation) are much facilitated. The whole matter is one of great interest, and is sure to attract the attention of surgeons throughout the world, who will, no doubt, succeed in improving on the results of Professor Esmarch.

Another foreign physician has endeavored to interest us by demonstrating on his own person very effectually the fact that by a modification of the method of gargling it is perfectly easy to introduce the fluids employed into the larynx, and to fill the supraglottic cavity of the larynx completely, so that the white vocal cords may be seen firmly contracted below the liquid, shining through it and bathed in it as to their upper surfaces. The common fallacy is to suppose that the epiglottis so guards the larynx that no fluid enters it. M. Guinier not only demonstrates the opposite truth, but shows how laryngeal gargling may be erected into a regular therapeutic method. His directions for introducing gargles into the larynx are,—

1. Slightly to raise the head.
2. To open the mouth moderately.
3. To protrude the chin and the lower jaw.
4. To phonate the diphthong *æ* (in the highest upper notes).

He asserts that he finds little trouble in teaching his patients at the baths of Cauterets to adopt this method of gargling, and that by doing this and *not* throwing back the head, none of the gargle is swallowed. What is quite certain is that Dr. Guinier himself has acquired the art in the most perfect manner, and goes through half an hour of gargling, demonstrating with the laryngoscope, with the greatest ease and without experiencing any annoyance. But practice certainly counts for much in such a performance. Singers and persons of some intelligence could, no doubt, without much difficulty, acquire this method of gargling; and for many singers, clergymen, and others, it is an art probably quite worth cultivating. But it is not given, I imagine, to every one to "gargle in his larynx," and certainly to few to accomplish the process with so much evident enjoyment as this enthusiastic physician.

The discussion on hospital statistics continues, and is, as I predicted, widening its area. The two former assistants of Sir James Y. Simpson, Dr. Lauchlan Aitken and Mr. Lawson Tait, are entering the field in defence of his statistics relating to hospitalism, but only with the effect of materially weakening such authenticity as formerly attached to the documents. Mr. Tait reveals the unexpected fact that one at least of these was altogether a forgery. He promises, however, to publish the whole of the original documents in a volume. This will have the effect of showing whence they were derived, and how far they cover a complete field, or represent the selected results of surgeons whose cases were so favorable as to make them anxious to publish them; but it will not remove the objection that they do not represent the absolute mortality of any one district, and especially not of any old town district. Mr. Prescott Hewitt intends, I hear, to arrange a "field-day" on the subject at the Clinical Society of London, of which he is President, for the purpose of inducing the leading surgeons of London to follow an example which he proposes to it, of stating the amount of "hospital disease" prevailing, in their experience, after operations in private houses, a converse side of the question well worth discussing, and which will throw a great deal of light upon the points at issue. Meanwhile Mr. Erichsen, who opened the fire by his introductory address, in which he quoted, endorsed, and pointed the moral of Simpson's charges against hospitals and hospital surgeons, is somewhat in trouble. The committee of University College are a little anxious at the unnecessary loss of life to which he points: they have called upon their surgical staff to assume whatever may be their share of responsibility in the matter; and so Mr. Erichsen will have to settle as to the facts with his colleagues, and as to the conclusions with his committee. He is quite strong enough and skilful enough to steer through the storm which he has raised, and the result can but be beneficial to science.

Sir Henry Holland leaves a fortune amounting to £9000 a year to his children. He died full of honors and of friends; and yet it must be mentioned, as a satire upon the gratitude and affection of the great, that this

eminent physician, to whom more than one generation of great persons are deeply indebted for various good offices, was carried to the grave almost unattended, except by his immediate family. For more than thirty years Sir Henry had been but little seen in professional circles, and was personally almost unknown to more than a very few of the present race of metropolitan physicians. He had interested himself but little in professional affairs. It is not surprising, therefore, that few medical men followed him to the grave. He was buried almost before they were aware that he had passed away. But it is not a little surprising that his wide circle of friends among the greatest personages cared so little to show a last mark of respect to his remains.

His death left vacant the court office (a nominal one) of physician to the Queen. This has been filled by the appointment of the existing President of the College of Physicians, Dr. Burrows. As a sort of consolation to Dr. Sieveking, who has been slightly treated by the Prince of Wales, and has never had the solid benefits of his nominal position as physician to the Prince and Princess, he has now been promoted to the honorary office of extraordinary physician to the Queen, vacated by Dr. Burrows. These are all paper appointments, and rather raise a smile than confer any solid distinction. The actual attendant of the Prince is Sir William Gull, and of the Queen, Sir William Jenner; while to fill Sir William Jenner's place when he is unable to attend, Dr. Wilson Fox and Dr. Marshall have been appointed to the household offices. There is always a good deal of hollowness about court appointments, and not unfrequently, as has been the case with Dr. Sieveking, they lead to humiliation and annoyance rather than to any real advantage. Many London physicians think that they might with advantage be dispensed with.

THE PREVENTION OF LOSS OF BLOOD IN SURGICAL OPERATIONS.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

IN looking, a few days ago, over the *Medical Times* of November 22, I read with great avidity your extract from the *British Medical Journal* of October 25, concerning the mode of preventing the loss of blood in surgical operations, as enunciated and practised by Professor Esmarch, of Kiel. I had, however, not read very far before I found myself in contact with an old acquaintance, and then it occurred to me, what we all have seen so often in print, that history repeats itself, not only in politics, in statesmanship, and in the arts and sciences, but above all, and in a most wonderful manner, in our own profession. It is seldom that one picks up a medical journal which does not contain some startling novelty as old as the hills, set forth with all the enthusiasm of a grand discovery, the happy sciolist never dreaming that he was announcing, perhaps for the fortieth time, what had long been forgotten, or, more properly speaking, what so few had learned and appreciated when first put in print, in so decided and

positive a manner that he who runs may read. It is to this class of professional men that the sentiment of Seneca applies with peculiar force, determined, as they seemingly are, that their knowledge shall shine before the world with a special lustre: "Qui sibi amicus est, scito hunc amicum omnibus esse."

I had not proceeded very far in the perusal of the lecture of the distinguished Professor of Kiel, when I said to myself, "Here is a broad field upon which the medical teachers, hospital surgeons, and medical editors of the United States may display their knowledge before their pupils and their readers, certainly for the next twelve months, if not for a much longer period." I inwardly congratulated them upon having fallen upon something that was really new, and likely, for a time at least, to take the place of the carbolic acid dressing and other miraculous procedures. I was not disappointed. Already the journals of this and other countries come to us loaded with the praises of the "new method of preventing hemorrhage in surgical operations," and, as a natural consequence, the name of Esmarch is upon the tongue of every physician and student. Esmarch, always a man of progress, has covered himself with glory; like Byron, he woke up one morning and found himself famous; and already our countrymen are prepared to contribute largely towards the erection of a statue in honor of the man who has achieved this wonderful discovery,—a discovery before which that of the ligature by Ambrose Paré and that of acupressure by Sir James Y. Simpson literally blanch and fade into insignificance. Only the other day, as I was credibly informed, one of our hospital surgeons, one of the most dexterous and beautiful operators in this goodly city, astonished his pupils and his learned confrères by cutting off a thigh for a poor fellow with the aid of this "preventive method" with hardly any loss of blood; and so thoroughly saturated is the medical mind, at this moment, in Philadelphia medical circles, with this wonderful discovery that no other topic is tolerated. The moment a man utters the words "carbolic acid," alludes to the latest improvement in the obstetric forceps, or hints at the best and safest method of securing the pedicle in ovariectomy, the offending individual is at once coughed down, pronounced an old fogey, or silenced by the cry, "Hear, hear, hear!" Now and then you may hear one, more bold than the rest, scream out, in a voice and tone that might charm Mahomet, "There is but one God, and Esmarch is his prophet." In Europe the same enthusiasm prevails. The medical journals everywhere speak of the "preventive method" as one of the greatest triumphs of the age, as a most astounding discovery. A surgeon of one of the great London hospitals, writing to one of his confrères in this city, gravely asks him whether he has made himself familiar with this mode of preventing hemorrhage in surgical operations, adding that it is regarded with the greatest favor by all his colleagues, and that everybody is making it the theme of conversation, of discussion, and of merited praise.

This "new method," as every reader of the *Times*

knows, simply consists in pressing the blood out of the part to be operated on, while it is held at a right angle with the body, and preventing its return until the knife has done its work. The patient being brought under the influence of chloroform, a bandage of india-rubber webbing is drawn tightly round the limb from its distal extremity upward, when the parts immediately above are firmly constricted with a piece of india-rubber tubing cast four or five times around the limb, the ends being secured together by hooks and chains. The elastic webbing being next removed, the operation is proceeded with, hardly any loss of blood following.

In a case of necrosis of both legs, described at length, in which this process was employed, the Professor and his assistant operated simultaneously upon the two limbs, the flow of blood from each bone hardly amounting to a teaspoonful, and the man, we are told, at his own request left the hospital on the twenty-first day.

The method of treatment here briefly described is, as the German Professor kindly informs us, applicable only to the extremities, and to the penis and the scrotum. Obviously, it is not adapted to operations upon the head, neck, or trunk; although he has suggested that advantage might be derived from encircling, as a preliminary step, one or more of the limbs with elastic tubing, so as to retain a store of blood in them, to be used in case of emergency from exhaustion by allowing the blood to re-enter the circulation.

"There is nothing new under the sun," is a saying as old as it is true. This mode of preventing hemorrhage in surgical operations is certainly no novelty in this country, whatever it may be on the other side of the Atlantic. We have heard within the last few days a surgeon of large experience declare that he had employed it upwards of thirty years ago; and in the first edition of Professor Gross's *System of Surgery*, published in 1859, vol. i. p. 663, the author, in speaking of amputations, gives, among others, the following instructions: "A third assistant takes charge of the tourniquet, but before applying it care is taken to empty the superficial veins by raising the limb and pressing it from above downwards; or, instead of this, the limb is *tightly* bandaged just before the operation. Such a precaution, however, is only of *material* moment when the patient is very feeble, and therefore ill able to bear the loss of blood."

In the above short sentence is obviously comprised, as if in a nutshell, the whole of this new and much-vaunted method of preventing hemorrhage in surgical operations. Professor Gross does not describe the procedure as a novelty, but as one so well known as not to require any special emphasis or illustration. He had not only repeatedly employed it himself in hospital and private practice, but he had witnessed its happy effects in the hands of others so repeatedly that it had ceased to impress him as a novelty when he indited the above sentences.

The German Professor presses out the blood, and then applies a gum-elastic bandage and encircles the limb with four or five turns of india-rubber tubing.

It may be asked, What is the difference whether the roller, when *tightly* applied, is an ordinary bandage or a gum-elastic one? Has not an ordinary roller, when tightly applied to a limb, and its effects have not been properly watched, often caused gangrene from the arrest of the blood in the arteries and veins, deep as well as superficial? Is there any difference in the circular constriction of a limb when made with a tourniquet or india-rubber tubing? There may be magic in elastic material thus used, which an ordinary plodding mortal may not have sense enough to perceive or to appreciate. If there is any actual difference, it is the difference between "tweedle-dum and tweedle-dee."

As was stated before, we shall hear much of this new method of preventing hemorrhage within the next year or two. The medical journals will teem with accounts of it. Numerous modifications will soon be suggested, as so many pegs to hang a little notoriety upon. Many will strive to excel in this particular direction, and not a few will regret that the method cannot be applied with safety to the "encephalic extremity," the contents of which will be not a little puzzled and perplexed in the approaching lucubrations and controversies. It is easy to foresee that the "carbolic acid treatment" will for a time be thrown into the shade, and that many wonderful things now agitating the professional mind will be swallowed up by the new method of preventing hemorrhage in surgical operations. The wounds left after operations thus performed will, we shall no doubt be told, always unite by the first intention; erysipelas and pyæmia—those frightful enemies of the human race—will no longer torment our patients; and the life of many a poor sufferer will be greatly prolonged by this astounding transatlantic discovery.

UNGUIS.

GLEANINGS FROM OUR EXCHANGES.

DEATH FROM CHLOROFORM IN BOSTON.—On November 10, in Boston, a lady to whom Dr. Eastham, a practising dentist, was administering an anæsthetic, suddenly expired. The following report of the circumstances of the case, and of the coroner's inquest, is condensed from the *Boston Medical and Surgical Journal* for November 20 and 27:

Dr. Eastham testified that the deceased had been his patient for twelve or fourteen years, during which time he had on several occasions given her anæsthetics, chloroform, ether, and gas, both separately and in combination.

On the forenoon of November 10, she came to his office for the purpose of having a tooth extracted, and insisted upon taking ether. He made a mixture of chloroform and ether, containing less than half chloroform by volume, poured about a teaspoonful on a cup-sponge, and began the administration, first holding the sponge a little distance from the nose, and then moving it nearer. After she had breathed it for two or three minutes (or, according to the same witness at a later stage of his examination, from a minute to a minute and a half), he told her he was about to proceed. She shook her head, as if to say that she was not ready, but he took hold of the tooth and extracted it, during which operation she straightened back, groaned, and screamed

a little, as if in pain, and afterwards went into a sort of hysterics and became rigid. At this point he did not notice her lips or try her pulse, but observed that her eyes were set wide open, like those of one in a spasm. He seized a napkin moistened with water and gave her a splash on the forehead; she seemed to revive, and a flush came over her face, upon which he sat her up and applied ammonia-water to her nose. Her dress was then loosened, but as she became pale again he sent out for assistance. Another dentist arriving, they proceeded to undo her corsets and rub her spine, continuing the application of strong ammonia. During this time, about fifteen minutes, she was sitting up in the chair; but as soon as a physician had been procured she was removed to the waiting-room and laid down, but she had then stopped breathing; artificial respiration was employed, and a battery was used until it was evident that she was past all restoration. This witness testified in addition that there are two peculiar and perfectly distinct shades from the use of anæsthetics, one for faintness and one for sick stomach, and that he thought the pallor in this case was of the former variety. He never felt the pulse while producing anæsthesia, but watched the temporal artery. He did not consider that chloroform, if given on a sponge with plenty of fresh air, was any more dangerous than ether, but supposed it would decompose the blood more quickly; had not fully anæsthetized her, because he considered her to be somewhat lacking in vitality; does not feel any anxiety when about to administer ether, chloroform, or the mixture; preferred the latter, because the patients are not so noisy or excited under its influence; used Squibb's chloroform, and Powers & Weightman's ether.

A friend of the deceased testified that two days before her death the latter appeared in excellent health, that she had never known her to complain of trouble in her heart, that she dressed loosely, and was not then nursing her child.

A lady who had accompanied the deceased to the dentist's confirmed Dr. Eastham's account: she had insisted on taking ether, but nothing was said about chloroform.

Dr. Osgood, the dentist who came when assistance was sent for, testified that he found her sitting in the chair, inclined forwards; her corsets were quite tightly laced; he could not detect any pulse or respiration, and believes she was dead at the time of his arrival.

Dr. R. H. Fitz, Pathologist to the Massachusetts General Hospital, read his account of the autopsy, made twenty-one hours after death. Rigidity was well marked; skull-cap and dura mater normal; longitudinal veins empty; moderate amount of blood in the veins of the arachnoid. Blood-vessels at the base of the brain contained but little blood; cerebral substance firm, with much less blood than usual. Heart and aorta unusually small; the cavities containing dark fluid blood of no unusual color or odor. Lungs of a bluish-red color; the posterior dependent portion quite dark; tissue contained air, and a somewhat increased amount of blood; no special degree of œdema; kidneys, liver, and uterus normal, but with rather more blood than usual. The examination gave no evidence of recent disease of any of the organs, or of chronic alterations sufficient to account for death; the fluid condition of the blood, its diminution in the brain, and its increase in the thoracic and abdominal viscera were abnormal, and might have been the result of various causes; the diminished size of the heart and aorta was probably of congenital origin. The blood is found liquid after death in cases of asphyxia, of poison from certain gases, and of some very malignant forms of disease in which decomposition is extremely rapid.

Dr. E. S. Wood, acting Professor of Chemistry at the Harvard Medical School, gave an account of his analysis of the anæsthetic used. The odor resembled that of ether mixed with chloroform, the latter being strongly perceptible. Its specific gravity was 1.043, which corresponds to that of a mixture of six parts by bulk of ether with four of chloroform, if allowance be made for an increase in the density of the two when mixed. The liquid answered to the tests both for chloroform and ether; it contained no hydrochloric or acetic acid, and no chlorine, showing that both the ether and chloroform were free from any deleterious ingredients, a small amount of alcohol only existing as an impurity.

The witness stated that the only statistics he had seen relative to the mortality occasioned by the use of ether or chloroform, or a combination of the two, were some which were published in Chicago in 1870, and which were copied into the last annual report on the practice of pharmacy and toxicology. Roughly, the proportion of deaths to cases in ether was one in twenty-five thousand; to cases in chloroform, one in twenty-five hundred; to cases of a mixture of the two, about one in five thousand. The smallest dose of chloroform reported as causing death was from fifteen to twenty drops by inhalation; one drachm taken into the stomach; one drachm of a mixture containing one part of chloroform to four of ether, by bulk. It has sometimes, but rarely, been possible to detect chloroform in the blood.

Dr. Henry J. Bigelow testified that, having heard the testimony, he believed there was no question but that the deceased had died of the inhalation of chloroform. The amount of ether in the mixture could not possibly cause death. He had never known of a case of death from ether properly administered. Chloroform has besides its narcotic power some very poisonous influence, which acts on the system, and in which it differs from ether.

Drs. Cabot, Clark, Gay, and Hodges testified to the same effect.

On the next evening the jury met, and presented the following verdict:

"That Mary F. Crie came to her death on Monday, the tenth day of November, 1873, between eleven A.M. and one P.M., in the office of Dr. Charles Eastham, a dentist, No. 25 Tremont Street, Boston, and that her death was caused by the inhalation of chloroform, administered in a mixture of chloroform and ether by the said Dr. Eastham. The jury uses this opportunity to caution the public against the inhalation of so dangerous an agent as chloroform for the production of insensibility to pain. In the opinion of the jury, the inhalation of sulphuric ether is safe, while the inhalation of chloroform, either alone or mixed, is always attended with danger."

It was signed,—Ezra Palmer, M.D., John A. Lamson, M.D., George Fabyan, M.D., George Lotz, M.D., Thomas Restieux, and Thomas Dolover.

EXCISION OF THE TONGUE (*The Lancet*, November 8, 1873).—In a case of cancerous ulcer of the tongue, Mr. Gant removed the organ in the following manner, leaving the floor of the mouth entire. An incision was made through the cheek on the left side, from the angle of the mouth to the junction of the ramus and the body of the bone; the tongue was seized with a forked vulsellum and drawn forwards and upwards; two curved aneurism-needles were passed through the base of the organ from before backwards, and a strong écarteur was then looped around the base, below the needles, which thus kept the loop well down around the whole tongue. It was worked slowly, and the tongue thus completely removed in thirty-eight minutes.

FATAL CASE OF DYSPHAGIA (*The Lancet*, November 1, 1873).—Mr. E. F. Fussell reports a case of difficult deglutition occurring in a man 47 years of age, of temperate habits, and having never had syphilis or any serious illness. There was no stammering, but some thickness of speech, so that he was unable to make himself thoroughly understood, partly from the excessive flow of saliva, which was continually running from his mouth, and partly perhaps from a paralysis of the muscles co-ordinating the power of speech. For some time he had been unable to swallow solids or even semi-fluid substances. He had had no hæmatemesis or bloody stools, no albuminous urine, and no mental symptoms whatever. On trying to swallow food it returned almost immediately. He refused to have an instrument passed, and soon died of inanition. At the post-mortem examination no disease was discovered in the mouth, tongue, larynx, pharynx, upper cervical vertebræ, pneumogastric nerves, œsophagus, or stomach. The other organs could not be examined.

ACTION OF THE CINCHONA ALKALOIDS ON BACTERIA (*The Practitioner*, November, 1873).—Dr. E. Buchanan Baxter arrives at the following conclusions as the results of a large number of experiments upon the influence of the four chief alkaloids of cinchona bark over bacteroid organisms:

1. Quinia is doubtless excelled by other antiseptics, but there is no substance equal to it in antiseptic power which can be introduced into the blood in the same proportions without risk of fatal effects, if we except the other cinchona alkaloids, and the sulphate of bebeeria.

2. Quinia in such fractional doses as are capable of being introduced into the circulation exerts an inhibitory, not a toxic, action upon microzymes. It may check septic changes, it cannot destroy the organisms to which such changes are due.

3. The four cinchona alkaloids are very nearly equal in antiseptic power. Arranged in the strict order of their efficacy, they stand thus:—quinia = quinidine; next comes cinchonidine; last, though at no great distance, cinchonia. This order corresponds to that in which they have been arranged with reference to their antiperiodic power.

4. Among reputed antiperiodics, the sulphate of bebeeria seems to equal quinia in antiseptic power.

5. Among reputed antiseptics, sodic sulpho-carbolate and strychnia have a decided value, though they stand some way below quinia; sodic sulphite has a feeble though decided antiseptic value; sodic hypo-sulphite, little or none; berberin and æsculin are hardly, if at all, antiseptic; potassic picrate is almost equal to quinia, but it is doubtful whether it can be given in sufficient doses without danger to life.

MUSCULAR PARALYSIS FROM MERCURIAL ABSORPTION (*Dublin Journal of Medical Science*, September, 1873).

—Dr. A. W. Foot reports the case of a man, æt. 23, who, while rubbing red mercurial ointment into cattle affected with pleuro-pneumonia, neglected to cover his hand, and afterwards only rinsed it in cold water. The next morning the hand and arm were numb and powerless; he could not flex, extend, or abduct the hand, and had a stinging sensation in the fingers. Three weeks later the condition persisted, though it was one of great weakness rather than complete paralysis; the deltoid was not affected, nor the muscles of the upper arm; there was no atrophy. He was ordered five grains of iodide of potassium twice a day, and subcutaneous injections in the affected forearm, at first of $\frac{1}{4}$ of a grain of strychnia every second day, and subsequently of $\frac{1}{2}$ of a grain. When he began to feel pain along the course of the median nerve, the injections were discontinued, and the primary induction current of Stöhrer's battery was employed daily. He

quickly improved, and soon recovered the full power and use of his hand and forearm.

ANOREXIA HYSTERICA (*British Medical Journal*, November 1, 1873).—At a recent meeting of the Clinical Society of London, Sir Wm. Gull called attention to a form of disease occurring in young women between the ages of fifteen and twenty-three, and characterized by extreme emaciation, which was often supposed to be due to latent tubercle, mesenteric disease, or so-called atrophy. He believed the cause of the affection to be central, not peripheral, and in using the word hysterical did not wish to be committed to its strict etymological value. The clinical characteristics of this disease are those of starvation only, and the diagnosis is to be made from the slowness of the pulse and breathing, the slightly depressed temperature, and the absence of any sign of visceral disease in the chest and abdomen. In the treatment, if possible, a change in the domestic relations should be made, food should be given at short intervals, and the patients should not be left to their own inclinations in the matter. If the exhaustion reached an extreme point, external heat might be required; but the principal dependence should be placed upon controlling moral influences, and upon feeding.

MISCELLANY.

ACCORDING to the official estimates for 1873, we have the following: *Department of Charities and Corrections*: Out-Door Poor Department, \$128,066; Bureau of Out-Door Sick Poor, \$5300; Bellevue Hospital, estimated number of patients 700, \$103,370, or \$147.67 each patient; Charity Hospital, estimated number of patients 950, \$133,302, or \$140.31 each patient; Hospital for Contagious Diseases, 180 patients, \$20,667; Fever Hospital, 60 patients, \$6179; Smallpox Hospital, 175 estimated inmates, \$24,950; Hospital for Incurables, \$13,393; Asylum for the Blind, 150 inmates, \$8055; Convalescent Hospital, 250 inmates, \$22,041; Lunatic Asylum, 1300 patients, \$119,919, or \$92.25 per patient; New York City Asylum for Insane, 650 patients, \$83,026, or \$127.72 per patient; Hospital for Epileptic and Paralytic Patients, 120 patients, \$13,172; Hospital for Infants, 450 children, \$51,780, or \$115.06 per child; Randall's Island Nurseries, 650 inmates, \$61,282, or \$93.58 per inmate; Nursery Hospital and Idiot House, Randall's Island, 450 inmates, \$47,887; Inebriate Asylum, \$23,611; Reception Hospital, Centre Street, \$10,180; Reception Hospital, 115th Street, \$5920; Ambulance Establishment, \$3995; General Drug Department, salaries, \$2500. Total, \$888,595, as the estimate for the above hospitals, etc., Department of Charities and Corrections.—*New York Medical Record*.

THE AGE OF EGGS.—*The Lancet* quotes the following from a French authority as a mode of ascertaining the age and consequent freshness of an egg: Dissolve one hundred and twenty grammes of common salt in a litre of water. If the egg is one day old, it will sink to the bottom; if it was laid the day before, it will not reach the bottom; if three days old, it floats; and if more than five, it comes to the surface, and the shell projects more and more according to staleness.—*New York Medical Record*.

CAUSTICS VERSUS WEEDS.—A recent writer of a chemical turn of mind says, "Two years ago I took a large house and grounds which had been uninhabited and utterly neglected for three years. The lawn is nearly an acre in extent. Dandelions, buttercups, plantains, docks, etc., were in the ascendant. After many attempts to eradicate them, I found at last that one drop of the common strong sulphuric acid dropped upon the crown of each weed entirely destroyed it, and it will never grow again. I used one of the ribbed bottles employed by chemists and photographers for dropping poisons, and found it to answer perfectly, and it enables one to apply the acid with great rapidity. Large docks, which have hitherto never been destroyed except by digging up, are effectually destroyed by the acid."

EARLY CLINICS.—That bedside teaching was pursued eighteen centuries ago, although in no very pleasant way for patients, appears from the following lines translated from Martial:

"I'm out of sorts, but Symmachus is here,
His hundred pupils following in the rear;
All feel my pulse with hands as cold as snow,
I had not fever then—I have it now."

—*Mapother's Address, Med. Press and Circular.*

As an example of the "multum in parvo" style, we extract the following from an article in a recent eclectic journal:

"Diagnosis—'jiggers.' Prescription—sulphite of soda. Result—fixed them the first day."

CHOLERA dejections and vomit in the Dresden Hospital are received in a mixture of sawdust and charcoal, on which petroleum is then poured and the mass burned.—*Northwestern Medical and Surgical Journal.*

SPIRITUALISM is a comet with a small body of natural fact and an enormous tail of guessing, of sensation, of superstitious and ignorant fear, and of conscious and interested imposture.—*John Hall, D.D.*

COSTE, the celebrated naturalist, was almost sightless at the time of his death, having destroyed his vision with the microscope. At the time of his decease he was sixty-six years of age.

It is proposed in Italy to erect a monument to Eustachius. Few anatomists have had their trumpet so much blown.—*Boston Medical and Surgical Journal.*

DR. F. Crace-Calvert, F.R.S., famous for his researches upon disinfectants, died in Dublin, October 24, aged fifty-three years.

NOTES AND QUERIES.

BUCKS COUNTY, PENNA., November 28, 1873.

DR. GROSS:

DEAR SIR,—I have a great desire to study medicine, but have what seems to me a great obstacle to overcome. It is a certain sympathy with the patient, in which I am affected as much by the operation as the patient himself, producing in me a sickness over which I have no control.

I have never seen but one operation performed in your college, and that had the above effect on me. Now, will you write and tell me if this feeling can be overcome? for by so doing you will oblige me greatly.

Respectfully,

J. B. C.

Answer.

PHILADELPHIA, November 29, 1873.

DEAR SIR,—The difficulty to which you refer is more imaginary than real, and can, with a little practice, be readily surmounted. The sight of a severe surgical operation is to many persons exceedingly disagreeable, and at first sometimes even sickening. I have seen as many as three, four, and even five young men faint around me at the first few clinics at our college at the opening of almost every session since I came into the school. But in the course of a week or two nothing of this kind is witnessed, and the most delicate student is able to look with perfect unconcern at the most bloody operation.

The human mind, however sympathetic, has a wonderful faculty of accommodating itself to circumstances. When I was a student in the office of the late Dr. George McClellan, it devolved upon me to hold the basin while an older pupil bled a patient, and the result was that I became so sick that I was compelled to step out into the yard to avoid fainting. I soon got over this feeling, and I presume there are few men who have performed more severe or bloody operations than I have, or who are more self-possessed in cases of emergency. Your own case, then, you perceive, is not a hopeless one. A little determination will enable you to overcome this feeling, and it is only necessary for you to persevere in your laudable effort to study medicine, to become a great surgeon. A tender heart, so far from being an objection, is one of God's greatest gifts in a practitioner of the healing art.

When you visit the city, it will afford me pleasure to see you, and to offer you in person a word of sympathy and encouragement.

Very truly yours,

S. D. G.

Mr. C.

CHESTER COUNTY MEDICAL SOCIETY.

At the stated meeting of the Chester County Medical Society held in West Chester on Tuesday, October 28, 1873, the following preamble and resolutions, offered by Dr. Jacob Price, were unanimously adopted:

"Whereas, Since our last meeting it has pleased God to remove from a life of usefulness and honor our esteemed colleague Dr. Wilmer Worthington, and whilst we bow in all humility to the dispensation, we cannot avoid, upon this occasion, giving expression to the sorrow his death has caused in the heart of every member: therefore,—

"Resolved, That this Society has heard with deep regret of the death of Dr. Wilmer Worthington, one of its founders, and through his long life one of its most faithful and useful members.

"Resolved, That in this event our Society has sustained a loss that cannot easily be replaced; and that the remembrance of his earnest and self-sacrificing devotion to the interests of science, of the medical profession, and of humanity, should stimulate us to increased energy in the discharge of the duties that rest upon us as physicians and citizens.

"Resolved, That this Society sympathize deeply with the family of the deceased in their great bereavement.

"Resolved, That a committee be appointed to prepare a biographical notice of the deceased, to be embodied in the Transactions of the Medical Society of the State of Pennsylvania.

"Resolved, That the Secretary be directed to furnish the family of Dr. Worthington with a copy of the foregoing resolutions, and also copies to each of the county papers, and the medical journals published in Philadelphia, for publication.

"EPHRAIM HOPKINS,

"Recording Secretary."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM DECEMBER 2, 1873, TO DECEMBER 8, 1873, INCLUSIVE.

VICKERY, R. S., ASSISTANT-SURGEON.—Assigned to duty at Jackson Barracks, New Orleans, Louisiana. S. O. 188, Department of the Gulf, November 28, 1873.

DE WITT, C., ASSISTANT-SURGEON.—Granted leave of absence for six months. S. O. 241, A. G. O., December 14, 1873.

KIMBALL, J. P., ASSISTANT-SURGEON.—Assigned to duty at Fort Randall, Dakota Territory. S. O. 266, Department of Dakota, November 28, 1873.